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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,550	12/28/2004	Takashi Manako	Q85348	2736
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SUGHRUE MION, PLLC				
2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800				
WASHINGTON, DC 20037				
EXAMINER				
MERCADO, JULIAN A				
ART UNIT		PAPER NUMBER		
1795				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/519,550

Applicant(s)

MANAKO ET AL.

Examiner

JULIAN MERCADO

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/88)
Paper No(s)/Mail Date 9-15-06, 3-9-05, 12-28-04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Remarks

Claims 1-32 are pending.

Information Disclosure Statement

The information disclosure statement filed September 15, 2006, March 9, 2005 and December 28, 2004 have been considered by the examiner.

Claim Objections

Claims, 2, 12, 4, 14 and 26 are objected to because of the following informalities:

In claims 2 and 12 at 2, it is suggested to change "non-electrolyte" to

--a non-electrolyte--.

In claim 4 at line 2, claim 14 at line 3 and claim 26 at line 2, it is suggested to change "sugers" to --sugars--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6, 16 and 28 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for discrete electrolytes of chloride, nitrate and sulfate, does not reasonably provide enablement an electrolyte having all three salt groups. See the specification on page 11, lines 3-7. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. It is suggested to replace "and" with --or--, or recite the claims in Markush format.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the sulfuric acid" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 at line 5 and claim 21 at line 6 each recites an identical limitation as in claim 1 and is rejected on the same grounds.

Claim 2 recites that the "compound is non-electrolyte" in line 2. This limitation is in direct contradiction to claim 5, which recites that "the compound is a strong electrolyte." It appears to the examiner, however, that by "non-electrolyte", the claims intend to recite a compound that is not sulfuric acid.

Claim 12 at line 2 and claim 24 at line 2 each recites an identical limitation as in claim 2 and is rejected on the same grounds. Refer to claim 15 for comparison to claim 12 and claim 27 for comparison to claim 24.

The term "strong electrolyte" in claims 5, 6, 15, 16, 27 and 28 is a relative term which renders the claim indefinite. The term "strong" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims 3, 4, 7-10, 13, 14, 17-20, 22, 23, 25, 26 and 29-32 are rejected under 35 U.S.C. 112, second paragraph, as being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 10-15, 20-27 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Prakash et al. (U.S. Pat. 6,444,343 B1).

For claims 1-5, 10-15, 20-27 and 32, Prakash et al. teaches a fuel for solid electrolyte type fuel cell having a solid electrolyte film, wherein the fuel includes a liquid organic fuel such as methanol, and an amine compound which is not sulfuric acid dissolved in the liquid organic fuel, such as ammonium salt of a carboxylic acid, *inter alia*. As these organic compounds are

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surfactants, it is asserted that they do not permeate the solid electrolyte film. See col. 13 line 63 et seq.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-9, 17-19 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prakash et al. (U.S. Pat. 6,444,343 B1).

The teachings of Prakash et al. are discussed above.

As to a concentration from 0.1 mmol/L to 5 mol/L, 1 mmol/L to 1 mol/L and a pH value from 4 to 8, while Prakash et al. does not explicitly teach these parameters, absent of unexpected results it is asserted that the concentration and pH are an optimizable parameters for a result-effective variable. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) Prakash et al. teaches a concentration ranging from 0.001% to 1.0%, which directly affects electrolyte retention. (ib.) A pH of 7, which is within the claimed pH range of 4 to 8 and such as found in pure distilled/deionized, would naturally flow from the parameters disclosed in Prakash et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

/J. M./
Examiner, Art Unit 1795

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795